# VASQUEZ BOULEVARD/INTERSTATE 70 SITE
# WORKING GROUP MEETING
# FINAL MEETING SUMMARY
# November 12, 1998

**EPA Conference Center - Timberline Room**
**999 18th Street, Second Floor**
**Denver**

## INTRODUCTION

EPA has hired CDR Associates to serve as a mediator for the VB-I70 working group. EPA believes a mediator would be of benefit to the process for this site due to the complexity of the site and the number of participants involved. EPA could opt to do a standard approach here, waiting until the findings have been published to involve interested parties. However, they would prefer to have up-front involvement, instead, and feel that CDR can help EPA and the interested parties to make this happen.

CDR perceives their role as neutrals to whom participants can voice concerns. CDR will ensure that information pertaining to the site is appropriately disseminated among members of the working group and that participants' interests are clearly communicated to EPA. The mediators for CDR are Mary Margaret Golten and Louise Smart.

## PARAMETERS OF THE WORKING GROUP

Clarification of the Study Area Boundaries

The boundaries for the study area are currently defined based on areas which have been sampled. The current sampling area is located west of I-25 and extends east to Colorado Blvd. The sampling also extends from 35th to 56th Avenues. It should be noted that EPA will also include the area south of I-70 (Globeville) in the study area since this area likely has been impacted by the Omaha Grant and Argo smelters. EPA's intentions are to clean up the neighborhoods as soon as possible if a problem is identified. These boundaries may be expanded if EPA determines that there are additional areas which require sampling. The timing for revisiting the site boundaries will be after more extensive sample results have been received, in the Spring of 1999.

Identification of the Neighborhoods Included in the Study Area

Requests were made to have summary data presented based on neighborhoods. In order to facilitate this request, EPA asked that the neighborhood representative provide boundaries for their neighborhoods. Five neighborhoods within the study area were identified as follows:

Clayton—This neighborhood extends from Colorado Blvd. to York, and lies between 26th and 40th Avenues.

Elyria—This neighborhood extends from Washington to York, and lies between 46th and the County Line

Swansea—This neighborhood extends from York to Vasquez Blvd. (possibly Colorado), and lies between 40th Ave. and the County Line

Cole—This neighborhood extends from Downing to York, and lies between 32nd Ave. and 46th Ave.

Globeville—This neighborhood extends from the Platte River to Fox, and lies between the County Line and the 4200 block.

There is also a small neighborhood which is located west of the river, but east of the railroad tracks. This neighborhood will most likely be included with the Globeville neighborhood.

While discussing the neighborhood boundaries, it was determined that in some instances, people who gave access permission for their properties may not have had samples collected. EPA will work with its contractors to determine how many homes may have been missed. Also, it was noted that samples were collected at a lower density between 38th and 35th Avenues. EPA will follow up to determine the rationale for the lower sampling.

Composition - Identification of Stakeholders and Representatives

The following stakeholders were identified. No additional recommendations were made during this meeting.

- EPA
- Neighborhood Representatives
- City and County of Denver
- Colorado Department of Health and the Environment
- ASARCO
- Colorado Attorney General's Office
- City Council
- Agency for Toxic Substances and Disease Registry (ATSDR)

In order to promote communications, each stakeholder organization will be requested to appoint one individual as a primary representative to the working group. Additionally, each organization should identify one alternate representative in order to provide continuity. It will be the representative's responsibility to see that the alternate is fully informed as this process continues.

The primary representatives and their alternates will comprise the main working group. In addition, seating around the table will be provided for other interested observers and time will be included on the agenda for their participation.

The community representatives expressed some concerns over ASARCO's inclusion in the working group and the presence of their legal representation. Therefore, some discussion was provided regarding the role of ASARCO in the working group. Although historically the community has not felt that ASARCO has participated much in past meetings, EPA hopes that the working group will help to promote understanding between ASARCO and the community. ASARCO indicated that they would like to be participatory and to be involved throughout this process. ASARCO's legal representative was present to address questions and enhance the process for decision implementation by being aware of the progress of this EPA process.

## GOALS AND EXPECTATIONS OF THE WORKING GROUP

The primary goal of establishing of working group is to promote open dialogue regarding the decision making process for this site.

**EPA's Expectations:** Bonnie Lavelle is the project manager for this site. This requires that she follow a specific process to assess risks and to evaluate clean up options. There are two ways that EPA can proceed: a) Work with scientists and involve the public once they have determined findings, or b) approach the community for their involvement in the decision making process up-front. By approaching the community up-front, EPA would request broad input on the scoping study, exposure pathways, and other factors involved in this process.

EPA wants to ensure that the working group understands the process that EPA is obligated to follow. Matt Cohn, the EPA site attorney, will clarify the legal constraints of the process, and Chris Weis, EPA's toxicologist, will provide a full explanation of the scientific constraints of the process. It is EPA's hope that the working group will provide advice and comment to inform decisions.

EPA encourages frank discussion and open dialogue and asked for a commitment from the working group to go through technical material and be involved to the extent possible. EPA welcomes the involvement of the working group and community in all aspects of the evaluation (e.g., toxicity evaluation, exposure pathways). The group should focus on the science and give advice during the course of the process. However, EPA also would like to have the working group understand EPA's limitations.

Up-front involvement by members of the working group will allow EPA to ensure that decisions will be implementable and will have community acceptance.

**Community Expectations:** Since many of the terms and methodologies are very technical, the community representatives would like EPA to provide them with a solid understanding of the concepts, using non-technical language in explanations where appropriate and taking the necessary time for questions of clarification.

**ATSDR Expectations:** In conducting public health assessments, ATSDR is required (1) to investigate how people might be exposed and whether or not harmful effects might occur from that exposure, (2) to involve the community in the investigation and to answer their questions and concerns, and (3) to provide community and health professional education when needed. ATSDR will be looking to members of the working group, either individually or through the working group itself, to help ATSDR in its investigation.

Other expectations are that the working group members will commit to the process through next summer. The current primary focus of the group will be on soils. EPA would like to make its decision by Spring of 1999, and to begin any required clean up work in the summer of 1999.

There will be an ongoing community outreach effort in addition to workgroup meetings. This community outreach effort will be based on input from the community in order to tailor the process to their needs. The Working Group is not the primary or only community involvement vehicle at this site.

## EPA PROCESS FOR CLEAN-UP DECISIONS AND SUPERFUND RISK ASSESSMENT METHODOLOGY

EPA provided general definitions and an overview of the process to the working group.

*Risk: an estimate of the probability of an adverse effect from exposure*

*EPA considers acceptable risks to range between 1 in 10,000 to 1 in 1,000,000*

Several overheads were presented during this meeting and are attached to these notes.

It was stressed that risks are not assessed for individuals but for populations. Calculations are made on a generic basis based on a range of potential exposures. Using these ranges, the distribution of risk can be calculated.

## RESULTS OF PHYSICO-CHEMICAL CHARACTERIZATION OF SOILS

Humans can be exposed to soil by several different mechanisms:

- Soil can be dispersed in dust which can then settle onto surfaces. Dust may then be ingested via hand to mouth contact or from settling onto eating surfaces (e.g., dinner plates)
- Soil may be directly ingested

The more we can learn about the characteristics of the soil and its contaminants, the better information and assumptions can be incorporated into the risk assessment process.

Soils from the Vasquez Boulevard—I70 study area have been tested by the University of Colorado-Boulder in order to determine some of their characteristics. Results are summarized in the draft report entitled 'Vasquez Boulevard & I-70 Residential Soils Supplemental Investigation; Physico-Chemical Characterization of Soils' which was distributed to the working group. The working group should review this document and provide written comments to EPA by November 30. Any technical questions can be addressed by Chris Weis (Region 8 Toxicologist) at (303) 312-6671.

Bulk samples vs. Fine samples

The concentration of a contaminant may vary by particle size. Other studies have indicated that the concentration will be higher in the smaller particle size soil fractions. For the initial VB-I70 soil analyses, EPA measured contaminant concentrations after sieving the soils through a relatively coarse sieve (2mm—or millimeters). Since EPA wanted to determine if the smaller particles (< 250 um—or micrometers, which are one millionth of a meter) had a different concentration of contaminants, 120 soil samples were selected for further analysis. These soils were selected randomly to encompass low to high metals concentrations. The "bulk" vs "fine" results were graphed to determine the correlation. All slopes were very close to 1.0, which indicates that there is very little difference between concentrations in bulk and fine particle sizes. ATSDR's opinion is that the slope for bulk versus fine samples may be significant at EPA's chosen removal action level of 450 ppm and asked that members consider that point during their evaluation.

Note: EPA has not yet determined if the bulk data should be adjusted based on these measurements.

Speciation of Samples (identification of the form of the arsenic or lead in the soil)

Speciation is performed using an electron probe microscope. Results of this test allow us to learn about the chemical nature of a contaminant and may provide information about its source. For samples from VB-I70 it was determined that the

primary phase of arsenic is arsenic trioxide. Multiple phases or forms were seen for lead with lead arsenic oxide and lead manganese oxide showing increased levels as concentration of lead in samples increased.

Mass & Particle Size Distribution

Samples were analyzed to determine which particle sizes the majority of the mass of a contaminant were contained in. Overall, the smaller particles tended to have more contaminant mass.

In Vitro Bioaccessability

EPA has conducted some in vitro studies to determine how much of the lead and arsenic in a soil sample is bioaccessable (available for absorption).

The lead in soils from VB-I70 ranged from approximately 60-80% bioaccessable (compared to EPA default of 60%), whereas the arsenic was only 3-26% bioaccessable (compared to national default of 100% and regional default of 80%).

It is important to note that these numbers may not be used in a rigorous quantitative way. They may, however, be used in a qualitative way to assess if risk has been over or under estimated.

## INITIAL SCOPING OF INTERESTS RELATED TO CLEAN UP AND CLEAN UP PROCESS

Questions were asked about the possibility of locally grown vegetables being contaminated by metals from the soil. As part of community interviews, EPA will perform a survey to understand how much home-grown vegetables and fruits community residents eat. It is envisioned that this exposure pathway will be included in the risk assessment. EPA would like to collect samples grown in neighborhood gardens to support data analysis. The State has offered to share information on the uptake of metals into vegetables with the working group.

## NEXT MEETINGS (Note: These dates are different from those discussed at the November meeting.)

It was decided that meetings will alternate between EPA's Conference Center and a community location. Additionally, EPA will try to schedule occasional evening meetings.

The next two meetings of the working group:

- December 8, 1998 (at the Swansea Recreation Center) 8:30 AM to

- January 14, 1999 **[PROPOSED]** (at the EPA Conference Center, 999 18th Street, Second Floor Conference room) 8:30 AM - 11:30 AM Note: Community representatives can park in the parking garage located under the EPA building. Parking tickets will be validated at the meeting.